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**Subsurface Investigation Report**

*related to*

**First Vermont Bank  
77 Merchants Avenue  
Rutland, Vermont**

Prepared for:

**Mr. John Errington  
First Vermont Bank  
89 Merchants Row  
Rutland, VT 05704**

ATC Project #41111-0006

December 20, 1996



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## 1.0 INTRODUCTION

This report details the subsurface environmental assessment performed by ATC Environmental Inc. (ATC) under contract with The First Vermont Bank (First Vermont), at a parcel located on 77 Merchants Avenue in Rutland, Vermont (the site) (Figure 7.1). The legal owner of this property is The First Vermont Bank. This work was performed pursuant to the November 11, 1996 ATC work plan for the site, which was approved by Banknorth on November 13, 1996. This investigation follows the removal and assessment of a leaking underground storage tank (LUST) formerly containing heating (#2) fuel oil conducted by ATC on November 5, 1996. The Vermont Department of Environmental Conservation (VT DEC) was informed of the LUST on November 5, 1996 and the intent of follow-up investigation via an "Expressway" notification enclosed with ATC's Tank closure Assessment Report dated November 12, 1996.

### 1.1 Site Description

The site is located behind the First Vermont Bank building along the north side of Evelyn Street in Rutland, Vermont. The site consists of an approximate .15 acre lot which previously contained the First Vermont drive-up teller and administration building. The demolition of the building was conducted through October, 1996 leaving only the former building's foundation, slab floors and asphalt driveway. The site is located within the City proper and is bordered by a retail outlet center known as The Opera House to the north, an unused building currently under renovation to the west, the First Vermont Bank building to the east and Evelyn Street to the south. The site gently slopes to the north and surface runoff from the site would generally flow in a northerly direction to rain water drain basins located within a right of way shared by the Bank and Marlin Development Corporation, current owners of the Opera House. Based upon the U.S. Geological Survey (Rutland Quadrangle), the site is approximately 540 feet above sea level. According to the Surficial Geologic Map of Vermont, the surficial geology of the area consists of Glacial (basal) Till which include fine sands, silt, and silty clay. Please refer to Appendix B for a description of specific soil types noted on site during the monitoring well installation conducted by ATC for this investigation. A Site Plan is included as Figure 7.2.

### 1.2 Previous Site Investigations

On November 5, 1996 ATC conducted a Tank Closure Assessment of a 5,000 gallon #2 fuel oil UST. The condition of the tank, approximated to be 35 years old, was poor with several holes and significant corrosion. The tank pit was observed to contain free phase petroleum atop groundwater at between ten and twelve feet below ground surface (bgs). Recharge of free product into the tank pit was noted following the collection of product and de-watering of the tank pit. An attempt to determine the extent of contamination via excavation was unsuccessful and all excavated soil was returned to the pit. Soils screened by a photoionization detector (PID) during the

tank closure assessment revealed volatile organic compounds (VOC) in the soil exceeding 100 parts per million. On November 5, 1996, pursuant to state DEC requirements, and on behalf of the First Vermont Bank, ATC notified the State of Vermont of the suspected release from the UST on site. For further background information please refer to ATC's Tank Closure Assessment dated November 12, 1996. Attached to the Tank Closure Report, "expressway" notification for an additional phase of investigation was conveyed to the VT DEC. The results of this additional investigation are included below.

## **2.0 MATERIALS AND METHODS**

### **2.1 Record Search**

Prior to commencing with field activities for this Phase II investigation, ATC reviewed Vermont State DEC files to pre-determine ground water flow direction in the vicinity of the site based on previous subsurface work conducted at nearby facilities with known UST releases. These reviews were also conducted to ascertain possible second source points of contamination which may be contributing to or mixing with the apparent release of the bank's UST removed on November 6, 1996. The results of this records search are covered in Section 3.1.

### **2.2 Monitoring Well Installation**

Ground Water monitoring wells MW-01, MW-02, MW-03 and MW-04 were installed at the site on November 20, 1996 to define groundwater flow direction and gradient as well as to determine any dissolved and/or liquid phase petroleum impact to the groundwater. Borings and well installations were conducted by Tri-State Drilling & Boring (Tri-State) of West Burke Vermont, using a hollow stem auger drilling rig. Monitoring well MW-01 was constructed using four inch flush thread PVC casing and 0.30 slot sized well screen. The remaining wells were constructed using two inch flush threaded PVC casing and ten foot sections of 0.20 slot sized screen. The annulus of the borehole was filled with sand pack to a minimum of 1 foot above the well screen to provide sufficient filtering of silt laden waters which would otherwise inhibit groundwater entry to the well. A bentonite seal was placed above the sand pack to prevent surface runoff from entering the well. The monitoring wells were secured with locking well caps, keyed padlocks and a limited access flush mount road box set in a concrete apron. MW-01 was completed with a stick-up well guard extending approximately 46 inches above ground surface which was also cemented in place. Monitoring well schematics are presented in Appendix A. Monitoring well data and groundwater elevations can be found in Table 1.

## 2.3 Soil Screening

During borehole advancement, split spoon soil samples were collected for subsurface geology notation and then screened by headspace analysis for volatile organic compounds (VOCs) utilizing an HNU Photoionization Detector (PID) (serial #601430) calibrated prior to the boring event with Isobutylene (100 ppm) and referenced to benzene. Refer to Appendix A for a summary of borehole geology and PID screening results of split spoon samples obtained for borings completed and logged by ATC on November 20, 1995.

## 2.4 Collection of Ground Water Samples

One round of groundwater samples were collected by ATC on November 21, 1996 from monitoring wells MW-02 and MW-04. Due to the presence of liquid phase petroleum atop ground water in MW-01 and MW-03, these well were not sampled. Approximately three well volumes were removed from MW-02 and MW-04 prior to sample collection. Figure 7.2 details the location of these sampling points. All groundwater samples were analyzed by EPA Method 8020. All samples were collected in 40 ml glass vials equipped with a Teflon septum and preserved with an HCL solution. All water samples were kept chilled until analyzed at the Con-Test E. Longmeadow, Massachusetts laboratory under chain of custody protocol. Water quality results are discussed in Section 3.2 of this report. A copy of the ground water analysis results are included in Appendix B.

## 2.5 Site Survey and Ground Water Elevations

A site survey was conducted by ATC on November 21, 1996 to ascertain spatial relationships and relative elevations between monitoring wells. The monitoring well top of casing (TOC) elevation for each well was determined by performing a site survey with a transit and rod. TOC was measured from the top of the PVC casing with the locking well cap removed. A benchmark was established on site with an assumed elevation of 100.00 feet and was utilized to determine relative top of casing elevations. Spatial relationships between monitoring wells and other significant site features were determined by use of a measuring wheel.

Water level and product thickness measurements and TOC elevations were obtained from the four monitoring wells on the site. Water level and product thickness measurements were determined using a interface probe, which is accurate to within one-hundredth of a foot. Ground Water elevations were calculated by subtracting the measured water levels from the top of the inner PVC casing elevations. Product thickness measurements were adjusted for density to derive adjusted ground water elevations for MW-01 and MW-03.

## 2.6 Potential Receptor Survey

On November 21, 1996 ATC performed a localized survey of the site and abutting properties and land features to determine any sensitive receptors that may exist which could potentially be impacted by subsurface contamination identified on site. This survey included identification of surface waters, drinking water sources, residential or business dwellings, subsurface service conduits and native flora or fauna which may be impacted. The results of this survey are included in section 3.3.

## 3.0 RESULTS

### 3.1 Records Search

On November 18, 1996, ATC reviewed four site files in preparation of the field work for this investigation. This file review showed the following:

- Midway Oil Corporation Gas Station is located across Evelyn Street and within 0.10 of a mile south west of the site. This gas station was initially investigated in July of 1989 and monitoring wells placed at this station revealed the presence of liquid phase gasoline atop the ground water table. Currently, the station is undergoing active remediation consisting of groundwater sparge enhancement and vapor extraction recovery. According to the current consultant, Weigner, Heindel & Noyes (WHN), in their October, 1996 Site Performance Report, ground water flow direction was determined to be to the east-southeast, away from the First Vermont Bank site, based on data obtained from thirteen monitoring wells gauged on August 23, 1996.
- Hugh Duffy Coal Company, Inc. is located at the corner of Pine Street and West Street, approximately 0.3 of a mile west of the First Vermont Bank. Two gasoline UST removals completed in August of 1991 revealed soil contamination associated with them. Monitoring wells since placed at this bulk fuel storage facility have shown ground water to flow in a south-southeasterly direction toward East Brook and away from the First Vermont Bank site.
- The former Woolworth Building was previously located on 86 Merchant Row, approximately 0.15 north-northeast of the First Vermont Bank located on 77 Merchants Row. Associated with the demolition of this building was the closure by removal of two USTs containing #2 fuel oil and heating oil in March and July of 1993. Five monitoring wells were installed at the lot and two of these wells, installed into one of the former tank pits revealed the presence of up to 0.05 feet of free product atop ground water in May 1993.

Follow-up product measurement showed that this product thickness reduced to 0.01 foot in one of the two wells during August of 1993. Ground water was shown to flow southwest from the Woolworth lot in the general direction of Merchants Row and First Vermont Bank.

- Beginning in June of 1994 complaints of petroleum odors in basements along Merchants Row prompted the VT DEC to initiate investigations as to possible source(s). Among the businesses which reported petroleum vapors or where investigated included First Vermont Bank on 77 Merchants Row and the Opera House Association on 67 Merchants Row. At the request of the VT DEC vapor source investigation was initiated by WHN on June 28, 1994 and included surveys at businesses along Merchants Row and Evelyn Street as well as those located to the west along West Street, Grove Street and State Street.

WHN's investigation report entitled "Emergency Vapor Survey", dated June 29, 1994, referred primarily to gasoline odors and concluded that "a common denominator in the presence of gasoline vapors in buildings in the West Street/Evelyn Street/Merchants Row area appears to be basement sumps .... connected to the municipal wastewater system." Also, the presence of these odors were short term (< 1 day) and coincidental with a recent rain storm event.

In their June 28, 1994 report, also prepared for the VT DEC, entitled "Investigation of Fumes in the Vicinity of Merchants Row", The Johnson Company, Inc. (Johnson) concluded:

- At the time of their report there were in excess of 75 USTs within an approximate 500 foot radius from the intersection of Merchants Row and West Street.
- There exist many potential preferential pathways associated with the development of such an urbanized area including an "historic natural stream channel" which begins on Church Street, crossing Willow Street through the vicinity of the former Woolworth's Building continuing across Merchants Row and diagonally beneath a block of buildings on the western side of Merchants Row and onto West Street. The diagram included with Johnson's report entitled "Site Assessment Merchant Row Area" indicates that most of this "natural stream channel" is occupied by municipal sewer line and that the western block of buildings includes the First Vermont Bank. A portion of this diagram is included with this report as Appendix C.
- Possible reasons for the incidence of petroleum vapors in basements were given and include a one time direct release of petroleum hydrocarbons into the sewer system, or release of petroleum within close proximity of city's

sewer lines eventually entering such lines through subsurface inflow/infiltration, or multiple source point releases in combination of multiple migratory paths. No specific release was defined to be at fault. The incidence of a recent rainfall event and the possible mobilization of hydrocarbons in the subsurface was also noted.

- More recently, Lincoln Applied Geology, Inc. (LAG) conducted an investigation of fuel oil vapors in the Albark building located on the corner of Merchants Row and West Street. Surrounding buildings and nearby city sewers were investigated. PID readings taken from sewer man ways ranged from background levels to as high as 90 ppm. A possible source of fuel oil odors at Albark was defined as a basement floor drain tied to the municipal sewer and rain water combined system. LAG's April 30, 1996 report entitled "Rutland City Petroleum Vapors" concluded that such vapors are "generated when residual petroleum in soils of downtown Rutland become liberated during times of high precipitation and resulting high ground water levels. These vapors then migrate into buildings via the combined sewer system".

### 3.2 Soils

#### Lithology

A total of fifteen split spoons were obtained by ATC during the borings for MW-01 through MW-04. Split spoons obtained from the boring for MW-01 began at 12 to 14 feet bgs. Since this boring was completed into the tank pit, spoons were not obtained above 12 feet bgs as soil above this level was previously defined and screened by PID. Split spoon soil samples obtained from MW-01 at 12 to 14, 15 to 17, 18 to 20 and 22 to 24 feet bgs revealed olive colored silt and fine sand with some gravel and trace clay. This boring met refusal in quartzite bedrock at 23 feet bgs.

Split spoons for borings conducted for the installation of MW-02, MW-03 and MW-04 revealed brown medium to coarse sands with fine and medium gravel to between 5 and 7 feet bgs. Below this depth, borings encountered olive, tan or grey colored silt with variable grades and amounts of sand, trace clay and gravel.

#### Soil Quality

Headspace analyses of split spoon samples for the boring for MW-01 yielded PID responses of 14.5 ppm at 12 to 14 feet bgs decreasing to 1.0 ppm for soil obtained at 22 to 23 feet bgs. By comparison, soils screened during the November 5, 1996 tank closure assessment between 8.0 and 10 feet bgs yielded between 72 ppm and 120 ppm.

PID screening results of split spoon soil samples obtained during the boring for MW-02 indicated VOC contamination of 3.5 ppm at 5 to 7 feet bgs, 5.8 ppm at 10 to 12 feet



bgs, 2.4 ppm at 15 to 17 bgs and non-detect at 20 to 22 feet bgs. MW-02 is located approximately 50 feet west of the tank pit.

PID screenings results of a grab soil sample obtained during the boring for MW-03 from 2.0 to 4.0 feet bgs indicated VOC contamination of 92 ppm. This grab sample was also observed to be saturated with fuel oil revealing a petroleum sheen and odor. Split spoon soil samples for this boring revealed PID headspace analysis results of 66 ppm for soil at 5 to 7 feet bgs, 13.6 ppm for soil at 8 to 10 feet bgs, 5.5 ppm for soil at 10 to 12 feet bgs and 1.8 ppm for soil from between 15 to 17 feet bgs. MW-03 is located approximately 40 feet north of the tank pit.

PID screening results of split spoon soil samples obtained during the boring for MW-04 indicated limited VOC contamination of 1.2 ppm for a soil sample obtained from 10 to 12 feet bgs. Headspace PID analysis of a split spoon soil sample obtained from 15 to 17 feet bgs for this boring did not reveal VOC impact.

### **3.2 Ground Water**

#### **Hydrogeology**

On November 21, 1996, ATC measured all monitoring wells to determine groundwater elevation and gradient. MW-01 was shown to contain 0.02 foot of fuel oil atop ground water. Ground water was measured at a depth of 10.60 feet below top of casing or at 91.11 feet relative to a 100 foot assumed datum. Ground water within MW-02 was measured at 7.06 feet below top of casing or at 91.48 feet relative to a 100 foot assumed datum. MW-03 was shown to contain 0.5 foot of fuel oil atop ground water. Ground water was measured at a depth of 4.28 feet (not including product density adjustments) below top of casing or at 90.05 feet relative to a 100 foot datum. Ground water within MW-04 was measured at 7.05 feet below top of casing or at 91.39 feet relative to the 100 foot assumed datum. Based on this data, groundwater flow can be generally defined to flow north with an approximate vertical groundwater flow gradient of 0.01%. Please refer to Table 1 for a summary of ground water elevation data and the Ground Water Gradient Map included as Figure 7.3 which depicts ground water flow.

#### **Ground Water Quality**

Monitoring wells MW-02 and MW-04 were sampled and analyzed for VOCs by EPA Method 8020. Results (WS-02) showed MW-02 to contain 0.5 ppb of benzene, 3.1 ppb ethyl benzene, 5.3 ppb toluene and 20.2 ppb total xylenes in initial samples obtained from this well. A duplicate sample (DUPLICATE/WS-03) from MW-02 revealed 1.8 ppb benzene, 4.9 ppb ethyl benzene, 2.5 ppb toluene and 14.6 ppb total xylenes. A sample WS-01 obtained from MW-04 showed water from this monitoring well to contain 2.0 ppb ethyl benzene, 2.3 ppb toluene and 14.7 ppb total xylenes. The

gasoline additive methyl tert-butyl ether (MTBE) was not detected in water samples obtained from MW-02 and MW-04. MW-01 and MW-03 could not be sampled due to the existence of a measurable amount of free product.

### 3.3 Potential Receptor Survey

On November 21, 1996 ATC performed a sensitive receptor survey and determined the following:

- There exist numerous commercial buildings within a 0.5 mile radius of the site. However, the potential for hydrocarbon impact (vapor) appears to be greatest to the Opera House building which borders the site to the north intersecting the apparent flow direction of impacted ground water. An HNU photoionization detector was utilized on November 21, 1996 to screen this building's bottom level for vapors. Although septic odors were noted within the bottom level of this building, possibly associated with a septic main which runs beneath it (see discussion below), the PID did not reveal VOC within this bottom level. A PID survey of the first level of this building was also conducted and did not reveal VOC in air. According to Mr. Mark Russell of Marlin Development, there do not exist crawl spaces or service areas within the bottom level of this building which are below the existing ground floor level.
- Underground utilities associated with or adjacent to the site include sewer lines, a rain water drainage basin system, water lines, gas lines and electrical conduit. According to Mr. Alan Shelby of the City of Rutland Department of Public Works, there exists both an active and abandoned sewer line located along the north and northeast perimeter of the site. Please also refer to the discussion above (Section 3.1) referencing a "historical natural stream channel" apparently within which these sewer lines maybe laid. The current sewer line flows and is run from Merchants Row (from the west) beneath the bank building turning north and running along the rear of the bank building and Opera House connecting to a junction located beneath the entry hallway of the lower level of the Opera House. This active sewer is reported to be 42 inches in diameter and located between 5 and 6 feet bgs. From this junction running northeast is an abandoned section of sewer line reported to measure 60 inches by 72 inches running beneath the Opera House and partially beneath the front of the bank building before connecting to a sewer line located beneath Merchants Row. This section of sewer line was abandoned in 1950 and replaced with the 42 inch line previously described. From the junction box beneath the lower entry of the Opera House the active 42 inch sewer line continues westerly where it intersects a line beneath West Street. Additionally there apparently exists a single 10 inch sewer line which is connected to the 42 inch line and runs south-southwest beneath Marlin Property where it connects to a 36 inch sewer line located approximately 6.5 feet below Evelyn

Street along the southern boundary of the site. A sewer location diagram suggests the 10 inch line may have also been abandoned during 1925.

- The subsurface of the north edge of the site also includes a rain water drainage basin system comprised of three basins which are connected and drain into the 42 inch sewer main described above, according to the Rutland Department of Public Works. The first of these basins is located on the teller drive and is 44 inches deep. The two remaining basins are located nearby the stairwell to the upper entry of the Opera House and in the back section of the walkway leading to the lower entry of the Opera House. These basins measure 17 inches and 28 inches in depth, respectively. All basins were found to be dry with no free standing water on November 21, 1996. PID monitoring of this rain water catch basin system did not reveal the presence of detectable VOCs on November 21, 1996.
- An underground natural gas line is also located at the rear or north portion of the site. This line is supplied by four underground propane storage tanks located in a grass portion of the Marlin Property which is adjacent to the site to the west and supply the Opera House for heating purposes. According to Mr. John Goldman of H.A. Eddy, who assisted in the installation of this gas line, it exists approximately 24 inches bgs and is composed of 3/8 inch copper line.
- Electrical conduits are also located beneath the ground surface of the northern half of the site. According to Mr. Peter Hadeka of Central Vermont Public Service (CVPS), there are three line feeds from an above ground electrical transformer. One conduit, which services the First Vermont Bank building to the east-southeast, is said to be three phase, 240 volt power with 4 inch PVC conduit. The line incoming to the transformer comes from the north west from beneath the Opera House with continued line service from the north. This second line is also three phase power within 4 inch PVC conduit. A third line exits from the transformer running west and turning southwest beneath the grassy portion of the Marlin Property. This third line is believed to be single phase power servicing the La Cone Unique, a seasonal ice cream stand bordering Evelyn Street, west of the site. Utilizing an electrical line locator on November 20, 1996, Mr. Hadeka estimated these electrical lines to be approximately 6 feet bgs and located directly west of the transformer. MW-03 was installed between these second and third electrical conduits approximately 40 feet north of the UST pit.
- Beneath Evelyn Street the city municipal water supply line runs east to west and is approximately 55 feet south of the UST pit. According to Mr. Shelby this water line is cast iron, 4 inches in diameter, and is gravity fed from the east. According to Ms. Pam Petry, City of Rutland's Health Officer, this

municipal system originates from the Rutland Watershed Reservoir located in Mendon Vermont. Mr. Shelby is not aware of any water supply wells within the city limits.

The nearest surface water exists as East Creek located approximately 0.4 of a mile west of the site. East Creek flows in a southwestern direction where it meets Otter Creek approximately 0.75 of a mile from the site.

#### 4.0 FINDINGS

- A 5000 gallon fuel oil tank owned by First Vermont Bank was closed by removal on November 5, 1996. This fuel oil tank was noted to have several holes and confirmed to have released fuel oil to the subsurface. The tank was estimated to be approximately 35 years old and the quantity of fuel lost to the subsurface has not been defined.
- Four monitoring wells were installed to attempt to determine the degree and extent of petroleum impact from the LUST. One four inch well was placed into the tank pit and set to 23 feet bgs -- the depth of refusal was apparently the top of quartzite bedrock. Three other 2 inch monitoring wells were installed to between 15 and 20 feet bgs and located approximately 35 feet south, 60 feet west, and 40 feet north of the tank pit.
- PID headspace analysis of soil samples obtained during borings for monitoring wells revealed VOC concentrations from below detection to 92.0 ppm as noted with a grab sample revealing product sheen obtained during the boring of MW-03.
- Analysis of ground water samples obtained from MW-02 and MW-04 revealed total BTEX concentrations of 28.65 ppb (23.8 ppb for a duplicate sample) and 18.9 ppb, respectively. Analysis results indicate that although ground water from MW-02 and MW-04 contains VOCs, the level of these compounds are below VT DEC primary ground water enforcement standards
- Liquid phase petroleum was noted within MW-01 at 0.02 feet thickness and at MW-03 at 0.50 feet thickness. Product in MW-03 was measured to be from 4.28 to 3.78 feet below top of casing or approximately from 3.5 to 4.0 feet bgs. This investigation has noted there exists four subsurface conduits which reside between 2.0 and 7.0 feet bgs, and therefore are possible receptors of impact by fugitive fuel oil identified.
- Based upon measurements obtained on November 21, 1996 from the new monitoring wells on site, ground water is between 4.0 and 7.0 feet bgs. Ground water flow is to the north at vertical gradient of less than 1%. General surface

drainage at the site is also toward the north. Ground water flow direction at the Midway Oil Gas Station, located approximately 0.10 mile southwest of the site, is to the south-southwest. Similarly, the ground water flow direction beneath the former Woolworth Building lot, located approximately 0.15 miles north of the site, has been shown to flow southeasterly. Also, the nearest surface water has been defined as East Creek, located approximately 0.4 miles southwest of the site. Based on this combined data it would appear the groundwater flow beneath the site is influenced by or altered by disturbances caused by prior site development and/or subsurface conduits. There may exist a ground water divide in the proximity of the southern boundary of this site, possibly beneath Evelyn Street, where ground water flow is again to the south-southwest. Additional monitoring wells into Evelyn Street or the First Vermont Bank parking lot accross Evelyn Street would be necessary to confirm this suspected ground water divide. Based on the ground water data obtained on November 21, 1996 from the wells installed with this phase of investigation, there appears there would be minimal risk to East Creek from contamination identified at this site.

The receptor assessment and background records search conducted by ATC notes the existence of numerous subsurface conduits which lie in the path of contaminant laden ground water flow beneath the north periphery of this site. Of particular interest, a combined (sewer and rainwater) municipal sewer system associated with the site may act as a preferential pathway for subsurface ground water and contaminant flow.

Product measured within MW-03, installed into this north area of the site, is likely associated with the site's former LUST. However, since the sewer conduit(s) associated with this portion of the City's combined sewage system may lie within a former "historical natural stream channel" as noted in Johnson's April 1994 report (see section 3.1), the preferential flow qualities of such a conduit may suggest the product associated with the subsurface in this area maybe also be the result of accumulated or transient impact from other releases. This consideration is made more plausible when considering the newer section sewer line beneath the north edge of the site takes a significant turn (90 degrees) west from a general southerly direction beneath the First Vermont and Opera House Building possibly creating a damming effect in the subsurface at this turn. The junction of this conduit to the previous sewer conduit abandoned in 1950 beneath the basement of the Opera House represents a second convergence of possible contaminants in the subsurface associated with the site.

- PID survey of the basement of the Opera House did not reveal the presence of VOCs on November 21, 1996. A sewer man way located within the basement entry hall of this building was not opened or screened for the presence of VOCs. A distinct septic odor was noted within this basement.

## 5.0 RECOMMENDATIONS

Based upon the results of this study, the following recommendations are presented:

- Provide a copy of this report and sampling results to the VT DEC and Mr. Ira Earl of the City of Rutland Emergency Services.
- Although the source of the contamination has been removed, the degree and extent of free phase fuel oil impact has not been fully determined. ATC recommends that a more conclusive PID survey be conducted of the basement portion of the Opera House to include the interior of the sewer line run beneath this building. PID assay of the ambient air within the basement(s) of the First Vermont Bank should also be conducted. These surveys would monitor for potential moderate to high hydrocarbon vapor into these buildings. These surveys should be performed a minimum of once weekly for a minimum duration of one month and should be combined with the additional field work described below.
- In order to attempt to determine the quantity of fuel atop ground water, ATC recommends that weekly bailing of liquid phase petroleum be conducted from MW-01 and MW-03 for a minimum of one month. At the end of this period of time, data accumulated from bailing and corresponding groundwater gauging/product thickness measurement will be evaluated to ascertain the next course of action. Product should be bailed into an approved DOT storage drum, which should be stored in an appropriate location to safeguard against vandals or spillage.
- One additional round of ground water sampling should be conducted for MW-02 and MW-04 as a qualitative measure to assure the VOC levels within these wells is stable following more sufficient monitoring well stabilization. Also, should the existance of liquid phase petroleum atop ground water in MW-01 diminish during the course of monitoring, ATC recommends ground water sampling and analysis from this monitoring well. Samples should be analyzed by EPA 8020 for VOCs. This additional round may be conducted any time during the following month's field activities as outlined above.

**6.0 Table 1: Monitoring Well Elevation Data & Ground Water Elevations:  
November 21, 1996**

Monitoring Well	TOC Elevation* (in feet)	Ground Water Measurement (feet below TOC)	Product Depth Measurement (feet below TOC)	Ground Water Elevation # 11/21/96
MW-01	101.71	10.60	10.58	91.11
MW-02	98.54	7.06	N/A	91.48
MW-03	94.33	4.28	3.78	90.49
MW-04	98.44	7.05	N/A	91.39

\* Top of Casing Measurements based upon a survey conducted by ATC Environmental on November 20, 1996. All measurements relative to a common 100 foot common datum (benchmark) located as the top step of the stairwell for the upper entry to the Opera House (See Figure 7.2).

# When applicable, product thickness are adjusted for density based upon assumed density of 0.88.

NG - Not Gauged

N/A - Not Applicable

**Figure 7.1**

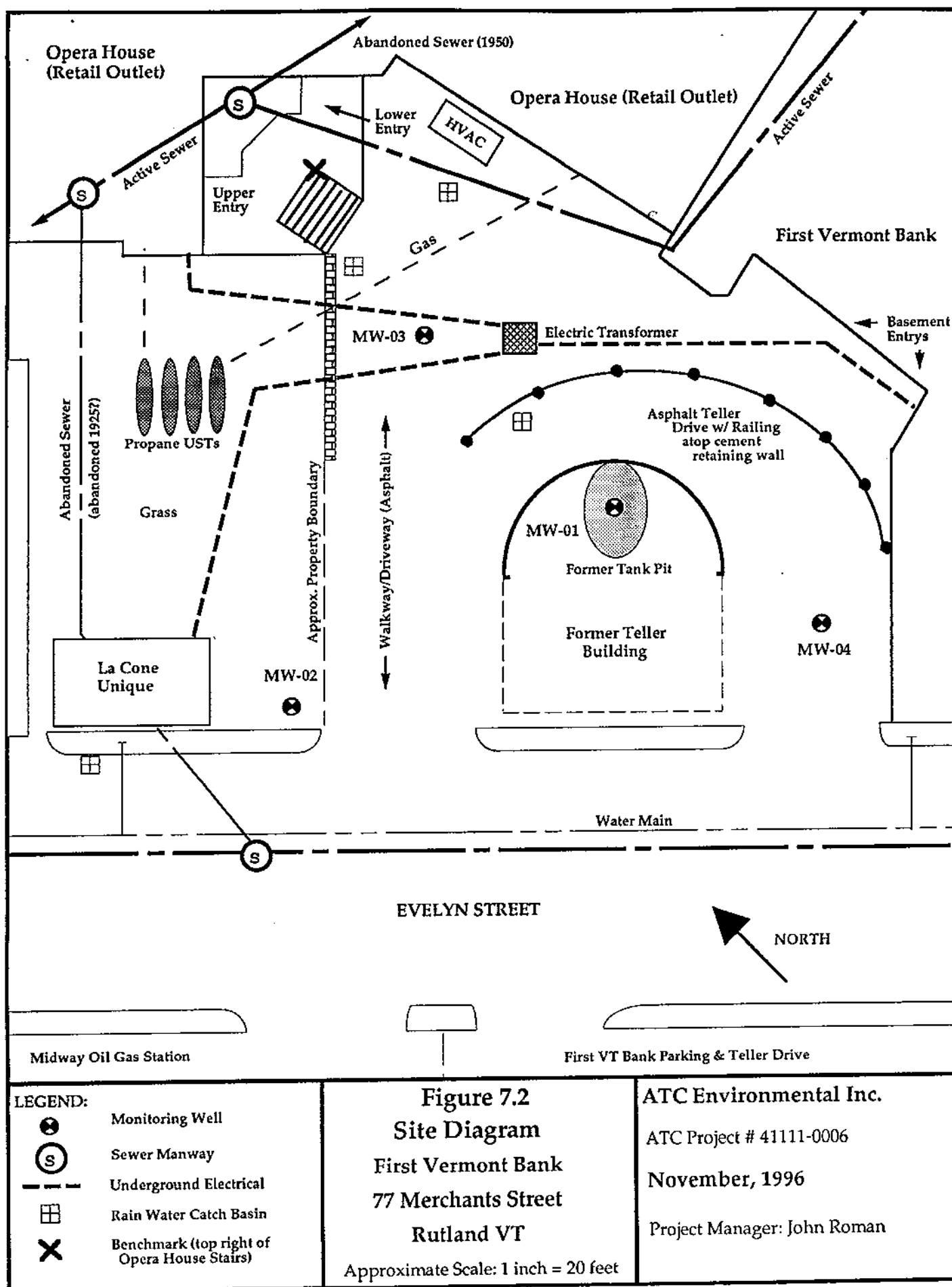
**Site Vicinity Map  
First Vermont Bank  
Rutland, Vermont**





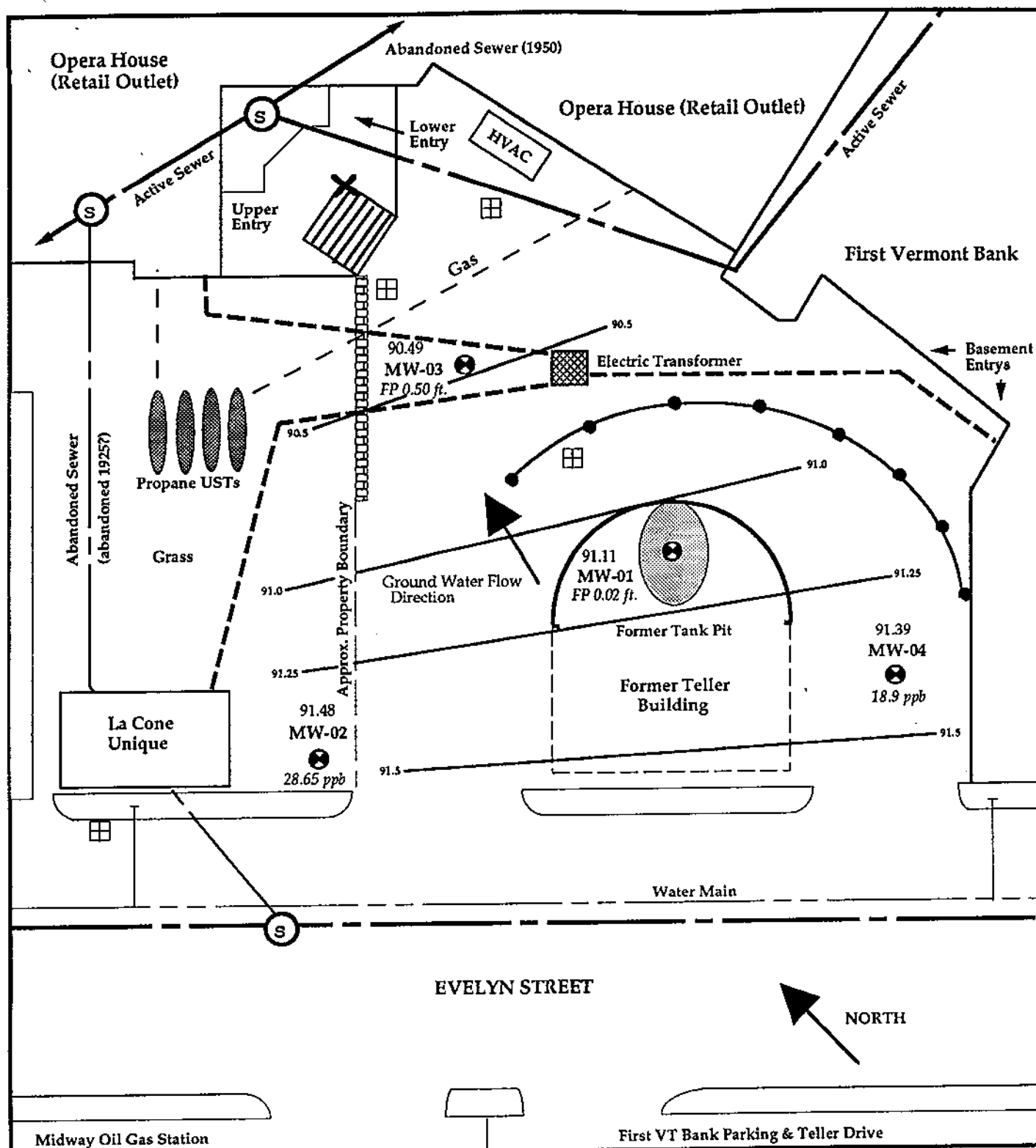
**Figure 7.2**

**Site Diagram  
First Vermont Bank  
Rutland, Vermont**



**Figure 7.3**

**Ground Water Gradient & BTEX Map  
First Vermont Bank  
Rutland, Vermont**



#### LEGEND:

- Monitoring Well
- Sewer Manway
- Underground Electrical
- Rain Water Catch Basin
- Ground Water Elevation Contour in feet (91.48)
- Groundwater total BTEX concentration in ppb or free product (FP) in feet

### Figure 7.3 Ground Water Gradient & BTEX Concentration Map

First Vermont Bank  
77 Merchants Street  
Rutland VT

Approximate Scale: 1 inch = 20 feet

ATC Environmental Inc.

ATC Project # 41111-0006

Sampling Date:  
November 21, 1996

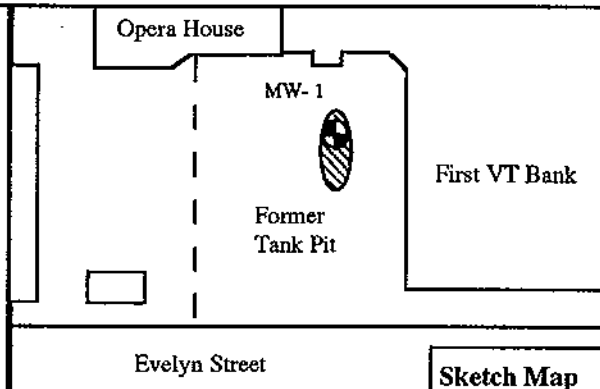
Project Manager: John Roman

**Appendix A**  
**Monitoring Well Schematics**

**ATC Environmental Inc.  
Monitoring Well Log**

**WELL NUMBER** MW-01

**PROJECT NAME** First Vermont Bank  
**PROJECT #** 41111-0006  
**LOCATION** 77 Merchants Row, Rutland VT  
**DATE DRILLED** 11/20/96 **BORING DEPTH** 23.0'  
**DIAMETER** 4"  
**SCREEN DIA.** 4" **LENGTH** 15.0' **SLOT SIZE** 0.30  
**CASING DIA.** 4" **LENGTH** 10.0' **TYPE** PVC  
**DRILLING CO.** Tri-State D & B **DRILLING METHOD** HSA  
**DRILLER** Neil Faulkner **LOG BY** JCR

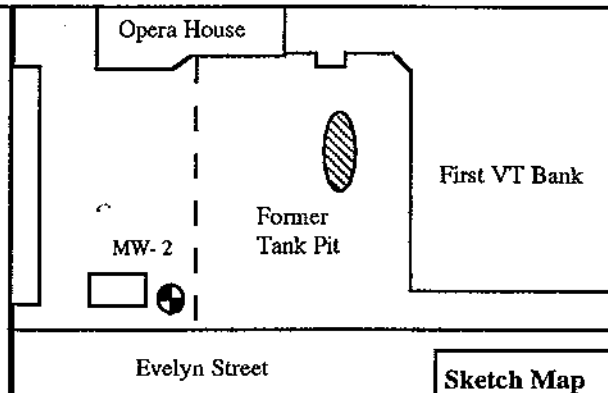


DEPTH IN FEET	WELL CONSTRUCTION	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
GRADE		TOP CAP		
		STEEL STICK-UP		
		CEMENT APRON		
		NATIVE FILL		
5		BENTONITE		
10		SCREEN (0.30)	14.5 PPM	12.0'-14.0' (3-4-6 FOR 18") 4" R Olive green SILT and very fine SAND w/ some fine angular GRAVEL. Very moist and slightly sticky. Quartz fragments in bottom of spoon. Odor.
15			6.0 PPM	15.0'-17.0' (4-6-7-8) 8"R Olive-yellow very fine SAND with SILT. Trace CLAY, fine and medium angular GRAVEL. Very moist, firm and slightly plastic. Slight Odor.
20		SANDPACK #1 Silica Sand	2.2 PPM	18.0'-20.0' (3-6-8-8) 10"R Olive and tan very fine SAND with SILT, trace CLAY and fine angular GRAVEL. Wet, sticky and plastic. Slight odor.
25		BOTTOM CAP	1.0 PPM	22.0'-24.0' (8-29 for 14") 8"R Olive and tan SILT, very fine SAND, with fine and medium angular GRAVEL. Coarse and medium SAND and Quartzite fragments in tongue of spoon. Wet and very sticky. No odor.
30			E.O.B. 23.0'	
35			9.2 PPM (borehole)	
40				
				WELL CONSTRUCTION: Screen 23.0' to 8.0' Riser 8.0' to + 4.0' Sand 23.0' to 6.0' Plug 6.0' to 4.0' Native 4.0' to 1.0 Cement 1.0' to 0.0'

**ATC Environmental Inc.  
Monitoring Well Log**

**WELL NUMBER** MW-02

**PROJECT NAME** First Vermont Bank  
**PROJECT #** 41111-0006  
**LOCATION** 77 Merchants Row, Rutland VT  
**DATE DRILLED** 11/20/96      **BORING DEPTH** 20.0'  
**DIAMETER** 2"  
**SCREEN DIA.** 2"    **LENGTH** 15.0'    **SLOT SIZE** 0.20  
**CASING DIA.** 2"    **LENGTH** 5.0'      **TYPE** PVC  
**DRILLING CO.** Tri-State D & B    **DRILLING METHOD** HSA  
**DRILLER** Neil Faulkner      **LOG BY** ICR



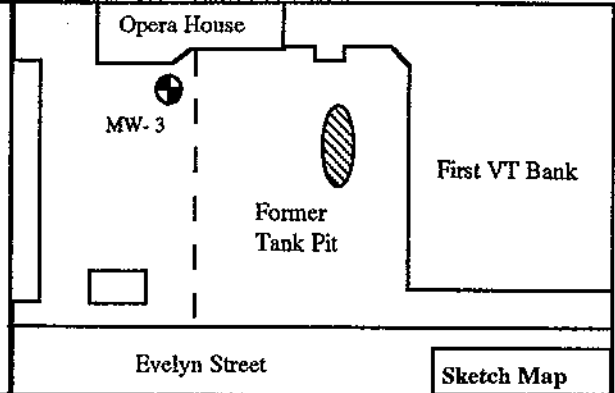
DEPTH IN FEET	WELL CONSTRUCTION	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
GRADE	TOP CAP	ROAD BOX & SAKRETE		
		BENTONITE	3.5 PPM	3.0-5.0' (2-2-4-2) No Recovery. Spoon Dry
5				5.0-7.0' (2-2-6-15) 14"R Brown coarse & medium SAND w/ some fine SAND, trace silt and GRAVEL for 7". Moist and slightly sticky.
10	SCREEN (0.20)		5.8 PPM	Abrupt change to dark grey and very dark grey SILT and fine SAND, trace coarse SAND and fine GRAVEL. Moist, firm and slightly sticky. Odor.
15	SANDPACK #1 Silica Sand		2.4 PPM	10.0-12.0' (8-8-10-10) 11"R Olive grey and tan SILT with fine SAND and trace GRAVEL. Very moist to wet, slightly sticky but firm. Odor.
20	BOTTOM CAP		0.0 PPM	15.0-17.0' (10-50-50-17) 20"R Olive and tan SILT, very fine SAND w/ some medium SAND and trace coarse SAND and fine GRAVEL. Wet to slightly moist; sticky to firm and plastic. Slight odor with moisture.
25			E.O.B. 20.0'	20.0-22.0' (6-19-23-30) 12"R Tan SILT & fine SAND w/ angular fine GRAVEL for 8". Wet, nonplastic. Clear change to finer and medium brown SAND w/ quartzite fragments. Dry, no odor.
30			1.2 PPM (borehole)	
35				WELL CONSTRUCTION: Screen 20.0' to 5.0' Riser 5.0' to 0.3' Sand 20.0' to 3.0' Plug 3.0' to 1.5'
40				



**ATC Environmental Inc.  
Monitoring Well Log**

**WELL NUMBER MW-03**

**PROJECT NAME** First Vermont Bank  
**PROJECT #** 41111-0006  
**LOCATION** 77 Merchants Row, Rutland VT  
**DATE DRILLED** 11/20/96 **BORING DEPTH** 15.0'  
**DIAMETER** 2"  
**SCREEN DIA.** 2" **LENGTH** 10.0' **SLOT SIZE** 0.20  
**CASING DIA.** 2" **LENGTH** 5.0' **TYPE** PVC  
**DRILLING CO.** Tri-State D & B **DRILLING METHOD** HSA  
**DRILLER** Neil Faulkner **LOG BY** JCR

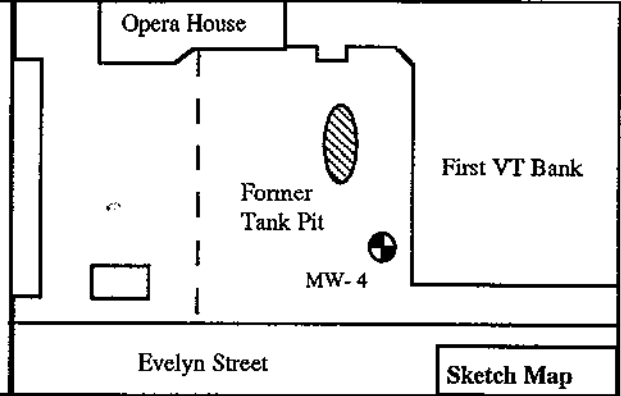


DEPTH IN FEET	WELL CONSTRUCTION	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
GRADE	TOP CAP			
		ROAD BOX & SAKRETH	92.0 PPM	0.2-4.0' (Grab) Brown coarse SAND and fine GRAVEL over dark grey coarse and medium SAND and Some SILT. Very moist, loose w/ petroleum.
		BENTONITE		
5			66.0 PPM	5.0-7.0 (4-5-7-7) 20"R Dark grey SAND for 1" over grey, olive and tan SILT w/ some coarse SAND and fine angular GRAVEL. Very moist to wet, slightly sticky. Strong odor.
10		SCREEN (0.20)	13.6 PPM	8.0-10.0' (7-7-8-7) 15"R Olive SILT with medium angular GRAVEL, trace fine GRAVEL and coarse SAND. Very Moist to wet, firm and sticky. Moderate odor.
		SANDPACK #1 Silica Sand	5.5 PPM	10.0-12.0' (5-12-16-17) 14"R Olive and tan SILT with fine angular GRAVEL, trace coarse SAND. Wet and very sticky. Odor.
15		BOTTOM CAP	1.8 PPM	15.0-17.0' (7-10-25-22) 16"R Olive SILT, coarse SAND with fine angular GRAVEL, very moist sticky: over coarse SAND, fine GRAVEL and SILT with quartzite fragments, dry and firm. Mild odor.
20			E.O.B. 15.0'	
			12.0 PPM (borehole)	
25				
30				
35				
40				
				WELL CONSTRUCTION: Screen 15.0' to 5.0' Riser 5.0' to 0.3' Sand 15.0' to 3.0' Plug 3.0' to 1.5'

**ATC Environmental Inc.  
Monitoring Well Log**

**WELL NUMBER    MW-04**

**PROJECT NAME** First Vermont Bank  
**PROJECT #** 41111-0006  
**LOCATION** 77 Merchants Row, Rutland VT  
**DATE DRILLED** 11/20/96      **BORING DEPTH** 23.0'  
**DIAMETER** 2"  
**SCREEN DIA.** 2"   **LENGTH** 15.0'   **SLOT SIZE** 0.20  
**CASING DIA.** 2"   **LENGTH** 5.0'      **TYPE** PVC  
**DRILLING CO.** Tri-State D & B   **DRILLING METHOD** HSA  
**DRILLER** Neil Faulkner      **LOG BY** JCR



DEPTH IN FEET	WELL CONSTRUCTION	NOTES	PID/OVM READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
GRADE	TOP CAP	ROAD BOX & SAKRETE		
5		BENTONITE		
10	SCREEN (0.20)		1.2 PPM	10.0-12.0' (1-3-5-8) 14"R Olive SILT CLAY over tan CLAY SILT. Very moist, very sticky and plastic.
15	SANDPACK #1 Silica Sand		0.0 PPM	15.0-17.0' (3-5-7-8) 8"R Tan coarse SAND and fine SAND with SILT, fine angular GRAVEL and Quartzite fragments. Wet, slightly sticky.
20	BOTTOM CAP		E.O.B. 20.0' 0.0 PPM	
25				
30				
35				
40				

WELL CONSTRUCTION: Screen 20.0' to 5.0'  
Riser 5.0' to 0.3'  
Sand 20.0' to 3.0'  
Plug 3.0' to 1.5'

**Appendix B**  
**Ground Water Laboratory Analytical Results**



39 Spruce Street • 2nd Floor • East Longmeadow, MA 01028 • FAX 413/525-6405 • TEL 413/525-2332

ATC ENVIRONMENTAL - VERMONT  
BROWNS TRACE BLDG., ROUTE 2  
RICHMOND, VT 05477  
ATTN: JOHN ROMAN

CONTACT: JOHN ROMAN  
FIELD OFFICE: VT

REPORT DATE: 12/02/96

PURCHASE ORDER NUMBER: 00000

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-26997  
JOB NUMBER: 41111-0006

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report

PROJECT LOCATION: 1ST VT BANK, RUTLAND, VT

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
WS-01	96B20031	GRND WATER	MW-4	602/8020 water
WS-02	96B20032	GRND WATER	MW-2	602/8020 water
WS-03	96B20033	GRND WATER	DUPLICATE	602/8020 water
WS-04	96B20034	GRND WATER	FIELD BLANK	602/8020 water

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

AIHA 308	AIHA ELLAP (LEAD) 6838
MASSACHUSETTS MA100	MAINE (POTABLE/NON-POTABLE)
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. 15036
NEW YORK ELAP 10899	RHODE ISLAND (LIC. No. 112)
PENNSYLVANIA DER 68-433	OHIO (ENVIRO. LEAD) # 10005
NEW HAMPSHIRE 2516	

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document.

*Edward Denson* 12/3/96  
SIGNATURE DATE

Tod Kopyscinski  
Director of Operations

Edward Denson  
Technical Director



JOHN ROMAN 39 Spruce Street • 2nd Floor • First Landing, MA 01028 • FAX 413/525-6405 • TEL 413/525-2332  
ATC ENVIRONMENTAL - VERMONT Contact: JOHN ROMAN 12/02/96  
BROWNS TRACE BLDG., ROUTE 2 Field Office: VT page 1 of 3  
RICHMOND, VT 05477 Purchase Order Number: 00000

Project Location: 1ST VT BANK, RUTLAND, VT  
Date Received: 11/22/96

LIMS-BAT #: LIMS-26997  
Job Number: 41111-0006  
Sample Matrix: GRND WATER

Sampled: 11/21/96

MW-4

WS-01

	Units	96B20031	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Benzene	ug/l	ND	11/27/96	MFF	0.2		
Chlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,2-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,3-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,4-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
Ethyl Benzene	ug/l	2.0	11/27/96	MFF	0.5		
Methyl tert-Butyl Ether (MTBE)	ug/l	ND	11/27/96	MFF	0.5		
Toluene	ug/l	2.3	11/27/96	MFF	0.5		
p&m-Xylene	ug/l	9.5	11/27/96	MFF	1.0		
o-Xylene	ug/l	5.2	11/27/96	MFF	0.5		

Sampled: 11/21/96

MW-2

WS-02

	Units	96B20032	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Benzene	ug/l	0.5	11/27/96	MFF	0.2		
Chlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,2-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,3-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,4-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
Ethyl Benzene	ug/l	3.1	11/27/96	MFF	0.5		
Methyl tert-Butyl Ether (MTBE)	ug/l	ND	11/27/96	MFF	0.5		
Toluene	ug/l	5.3	11/27/96	MFF	0.5		
p&m-Xylene	ug/l	13.3	11/27/96	MFF	1.0		
o-Xylene	ug/l	6.9	11/27/96	MFF	0.5		

MDL = Method Detection Limit  
ND = Not Detected  
BDL = Below Detection Limit  
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or  
regulatory level for comparison with data to  
determine PASS (P) or FAIL (F) condition of results.



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12/02/96

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Purchase Order Number: 00000

LIMS-BAT #: LIMS-26997

Job Number: 41111-0006

Sample Matrix: GRND WATER

Sampled: 11/21/96

DUPLICATE

WS-03

	Units	96820033	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
Benzene	ug/l	1.8	11/27/96	MFF	0.2		
Chlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,2-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,3-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,4-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
Ethyl Benzene	ug/l	4.9	11/27/96	MFF	0.5		
Methyl tert-Butyl Ether (MTBE)	ug/l	ND	11/27/96	MFF	0.5		
Toluene	ug/l	2.5	11/27/96	MFF	0.5		
p&m-Xylene	ug/l	9.0	11/27/96	MFF	1.0		
o-Xylene	ug/l	5.6	11/27/96	MFF	0.5		

Sampled: 11/21/96

FIELD BLANK

WS-04

	Units	96820034	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
Benzene	ug/l	ND	11/27/96	MFF	0.2		
Chlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,2-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,3-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
1,4-Dichlorobenzene	ug/l	ND	11/27/96	MFF	0.5		
Ethyl Benzene	ug/l	ND	11/27/96	MFF	0.5		
Methyl tert-Butyl Ether (MTBE)	ug/l	ND	11/27/96	MFF	0.5		
Toluene	ug/l	ND	11/27/96	MFF	0.5		
p&m-Xylene	ug/l	ND	11/27/96	MFF	1.0		
o-Xylene	ug/l	ND	11/27/96	MFF	0.5		

MDL = Method Detection Limit

ND = Not Detected

BDL = Below Detection Limit

NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



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ANALYTICAL LABORATORY

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12/02/96

page 3 of 3

Analytical Method(s):

EPA 602/SW846 8020

SAMPLES ARE CONCENTRATED BY PURGE AND TRAP FOLLOWED BY GAS CHROMATOGRAPHIC  
ANALYSIS WITH PHOTOIONIZATION DETECTION (PID).

MDL = Method Detection Limit  
ND = Not Detected  
BDL = Below Detection Limit  
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or  
regulatory level for comparison with data to  
determine PASS (P) or FAIL (F) condition of results.

## QC SUMMARY REPORT

 SAMPLE QC: Sample Results with Duplicates  
 Sample Matrix Spikes and Matrix Spike Duplicates

 BATCH QC: Lab Fortified Blanks and Duplicates  
 Standard Reference Materials and Duplicates  
 Method Blanks

Report Date: 12/02/96

Lims Bat #: LIMS-26997

Page 1 of 2

QC Batch Number: GC/PID-1383

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
96B20031	Benzene	Sample Amount	<0.2	ug/l	
		Matrix Spk Amt Added	10.0	ug/l	
		MS Amt Measured	9.2	ug/l	
		Matrix Spike % Rec.	91.5	%	
	1,4-Dichlorobenzene	Sample Amount	<0.5	ug/l	
		Matrix Spk Amt Added	10.0	ug/l	
		MS Amt Measured	8.1	ug/l	
		Matrix Spike % Rec.	80.7	%	
	Ethyl Benzene	Sample Amount	2.0	ug/l	
		Matrix Spk Amt Added	10.0	ug/l	
		MS Amt Measured	11.0	ug/l	
		Matrix Spike % Rec.	90.2	%	
	Toluene	Sample Amount	2.3	ug/l	
		Matrix Spk Amt Added	10.0	ug/l	
		MS Amt Measured	11.1	ug/l	
		Matrix Spike % Rec.	88.1	%	
	o-Xylene	Sample Amount	5.2	ug/l	
		Matrix Spk Amt Added	10.0	ug/l	
		MS Amt Measured	13.8	ug/l	
		Matrix Spike % Rec.	86.0	%	
	p&m-Xylene	Sample Amount	9.5	ug/l	
		Matrix Spk Amt Added	20.0	ug/l	
		MS Amt Measured	26.8	ug/l	
		Matrix Spike % Rec.	86.6	%	
	1,2-Dichlorobenzene	Sample Amount	<0.5	ug/l	
		Matrix Spk Amt Added	10.0	ug/l	
		MS Amt Measured	9.4	ug/l	
		Matrix Spike % Rec.	94.3	%	
	1,3-Dichlorobenzene	Sample Amount	<0.5	ug/l	
		Matrix Spk Amt Added	10.0	ug/l	
		MS Amt Measured	8.9	ug/l	
		Matrix Spike % Rec.	89.0	%	
	Methyl tert-Butyl Et	Sample Amount	<0.5	ug/l	
		Matrix Spk Amt Added	10.0	ug/l	
		MS Amt Measured	8.8	ug/l	
		Matrix Spike % Rec.	88.4	%	
	Chlorobenzene	Sample Amount	<0.5	ug/l	
		Matrix Spk Amt Added	10.0	ug/l	



SAMPLE QC: Sample Results with Duplicates  
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates  
 Standard Reference Materials and Duplicates  
 Method Blanks

Report Date: 12/02/96

Lims Bat #: LIMS-26997

Page 2 of 2

QC Batch Number: GC/PID-1383

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----		-----
		MS Amt Measured	9.3	ug/l	
		Matrix Spike % Rec.	93.0	%	
	1-Cl-2-Fluorobenzene	Sur. Recovery (PID)	106.6	%	83.2-111.6
96820032	1-Cl-2-Fluorobenzene	Sur. Recovery (PID)	107.7	%	83.2-111.6
96820033	1-Cl-2-Fluorobenzene	Sur. Recovery (PID)	95.8	%	83.2-111.6
96820034	1-Cl-2-Fluorobenzene	Sur. Recovery (PID)	102.2	%	83.2-111.6
BLANK-05785	Benzene	Blank	<0.2	ug/l	
	1,4-Dichlorobenzene	Blank	<0.5	ug/l	
	Ethyl Benzene	Blank	<0.5	ug/l	
	Toluene	Blank	<0.5	ug/l	
	o-Xylene	Blank	<0.5	ug/l	
	p&m-Xylene	Blank	<1.0	ug/l	
	1,2-Dichlorobenzene	Blank	<0.5	ug/l	
	1,3-Dichlorobenzene	Blank	<0.5	ug/l	
	Methyl tert-Butyl Et	Blank	<0.5	ug/l	
	Chlorobenzene	Blank	<0.5	ug/l	



(413) 525-2332  
FAX (413) 525-6405

# CHAIN OF CUSTODY RECORD

39 SPRUCE ST. • 2ND FLOOR • EAST LONGMEADOW, MA 01028

Client Name: ATC Environmental Inc. Telephone: 802-434-2113  
Attn: JOHN ROMAN Batch #: 26997  
Address: POB 3, Rt 2  
RICHMOND VT 05477 Project #: 41111-0006  
Site Location: 1ST VT BANK - RUTLAND VT  
Sampled By: JOHN ROMAN Client P.O. #: \_\_\_\_\_  
Call Results: Yes \_\_\_\_\_ No X  
Fax Results: Yes X No \_\_\_\_\_

Field Sample I.D.	Sample Description	Lab #	DATE SAMPLED		Composite	Grab	MATRIX							Preservative (Use Code)	Container (Use Code)	EPA 8160																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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## CONTAINER CODE

P: PLASTIC (\_\_\_\_ Size) V = 40 ml vial G = Glass (\_\_\_\_ size) A = 1000 ml Amber O = Other \_\_\_\_\_

## PRESERVATIVE CODE:

I = ICED N = HNO<sub>3</sub> H = HCl S = NaOH T = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> O = OTHER \_\_\_\_\_

Relinquished by: (Signature)

Date Time

Received by: (Signature)

Turnaround Requested: \_\_\_\_\_ 24-Hour \_\_\_\_\_ 48-Hour X Normal

Other \_\_\_\_\_ Date Required \_\_\_\_\_

Relinquished by: (Signature)

Date Time

Received by: (Signature)

Remarks/Comments:

Relinquished by: (Signature)

Date Time

Received by: (Signature)

\*MATRIX OTHER \_\_\_\_\_

**Appendix C**

**Excerpted Diagram**

**Site Assessment - Merchants Row Area  
taken from the Johnson Company Report  
dated July 26, 1994 entitled**

**"Investigation of Fumes Reported in the Vicinity of Merchants Row"**

